INTERSECTION OPERATION

THE INTERSECTION WILL OPERATE IN A NEMA EIGHT-PHASE, FULL-TRAFFIC-ACTUATED MODE WITH THE MD 237 APPROACHES OPERATING CONCURRENTLY AND THE HORSEHEAD/CHANCELLORS RUN PARK APPROACHES OPERATING CONCURRENTLY.

EXCLUSIVE/PERMISSIVE LEFT-TURN PHASING IS PROVIDED FOR THE NORTHBOUND AND SOUTHBOUND MD 237 APPROACHES.

AN ALTERNATE PEDESTRIAN PHASE IS PROVIDED ACROSS THE SOUTH LEG OF MD 237. PEDESTRIAN INDICATIONS ARE PROPOSED ACROSS HORSEHEAD ROAD AND CHANCELLORS RUN PARK ENTRANCE. APS NOTES

WHEN THE PEDESTRIAN LOCATES AND PRESSES THE PUSHBUTTON FOR AN EXTENDED TIME. THE PUSHBUTTON UNIT WILL ANNOUNCE THE FOLLOWING

1. MD 237 (CHANCELLORS RUN ROAD)

WAIT: "WAIT TO CROSS CHANCELLORS RUN AT HORSEHEAD"

WALK: THE PUSHBUTTON UNIT WILL PROVIDE A RAPID TICK

2. HORSEHEAD ROAD

WAIT: "WAIT TO CROSS HORSEHEAD AT CHANCELLORS RUN"

THE PUSHBUTTON UNIT WILL PROVIDE A RAPID TICK

3. PARK ENTRANCE

WAIT: "WAIT TO CROSS PARK ENTRANCE AT CHANCELLORS RUN"

WALK: THE PUSHBUTTON UNIT WILL PROVIDE A RAPID TICK

\* MESSAGE USED IF DISTANCE FROM NEAREST PUSHBUTTON FOR PERPENDICULAR CROSSING IS < 10'

\*\* MESSAGE USED IF CROSSWALK DIVERGES FROM OR CONVERGES WITH PARALLEL TRAFFIC

NOTE: MESSAGES FOR INTERSECTION CONFIGURATIONS, VARYING FROM THE ABOVE

ARE TO BE APPROVED BY THE DIRECTOR. OFFICE OF TRAFFIC AND SAFETY.

CONTROLLER REQUIREMENTS

INSTALL A FULL-TRAFFIC-ACTUATED, EIGHT-PHASE CONTROLLER WITH VIDEO INTERFACE EQUIPMENT (1-4) CAMERAS, TWO (2) FOUR-CHANNEL, TIME-DELAY-OUTPUT LOOP DETECTOR AMPLIFIERS WITH SYSTEM PACKAGE AND ASSOCIATED HARNESSES HOUSED IN A NEMA SIZE "6" BASE MOUNTED CABINET.

PHONE DROP

UPON COMPLETION OF THIS PROJECT, THE CONTRACTOR SHALL NOTIFY MR. ROBERT SNYDER OF SHA AT (410) 787-7635 TO ARRANGE FOR THE PHONE LINE INSTALLATION. THE CONTRACTOR IS TO PROVIDE MR. SNYDER THE NEAREST STREET ADDRESS, ZIP CODE, AND PHONE NUMBER.

## MAINTENANCE OF TRAFFIC

THE FOLLOWING TRAFFIC CONTROL STANDARDS SHALL BE REFERENCED FOR THE PROJECT. ADDITIONAL TRAFFIC CONTROL STANDARDS MAYBE USED AS DIRECTED BY THE ENGINEER.

STANDARD NO. MD-104.02-01 (SHOULDER WORK)

STANDARD NO. MD-104.02-03 (LANE SHIFT)

STANDARD NO. MD-104.02-14 (INTERSECTION FLAGGING OPERATION)

## PROJECT CONTACTS

THE CONTACT PERSONS FOR SHA ARE AS FOLLOWS:

MS. KIMBERLY TRAN ASSISTANT DISTRICT ENGINEER - TRAFFIC

PHONE: (410) 841-1019

MR. CHUCK E. GEORGE ASSISTANT DISTRICT ENGINEER - MAINTENANCE PHONE: (410) 841-1013

MR. JOHN S. MAYS DISTRICT UTILITY ENGINEER

PHONE: (410) 841-1039 MR. RICHARD L. DAFF, SR. CHIEF, TRAFFIC OPERATIONS DIVISION PHONE: (410) 787-7630 **EQUIPMENT LIST "A"** 

A. EQUIPMENT TO BE SUPPLIED BY THE SHA

ITEM NO.		QUANTITY	DESCRIPTION
9044		1 EACH	EIGHT-PHASE, FULL-TRAFFIC-ACTUATED CONTROLLER WITH SYSTEM PACKAGE HOUSED IN A NEMA SIZE "6" BASE MOUNTED CABINET
9086	·	1 EACH	VIDEO DETECTION INTERFACE EQUIPMENT: 1-4 CAMERAS
9571		148 S.F.	SHEET ALUMINUM SIGNS TO CONSIST OF :
	Section 1		- 4 EACH D-3(1) SIGN (VARIABLE × 16 IN.) DUAL FACED - MAST ARM MOUNT
:			- 1 EACH ASSOCIATED SHIELD ASSEMBLY "NORTH, MD , RIGHT ARROW" (30 IN. x 51 IN.) - POLE MOUNT
			- 1 EACH ASSOCIATED SHIELD ASSEMBLY "NORTH, MD , LEFT ARROW" (48 IN. x 75 IN.) - POLE MOUNT
			- 1 EACH ASSOCIATED SHIELD ASSEMBLY "SOUTH, MD , RIGHT ARROW" (30 IN. × 51 IN.) - POLE MOUNT
			- 1 EACH ASSOCIATED SHIELD ASSEMBLY "SOUTH, MD , LEFT ARROW" (48 IN. × 75 IN.) - POLE MOUNT
			- 2 EACH R10-3(1) SIGN (9 IN. × 15 IN.) TO READ "PUSHBUTTON TO CROSS CHANCELLORS RUN ROAD"
			- 2 EACH R10-3(1) SIGN (9 IN. × 15 IN.) TO READ "PUSHBUTTON TO CROSS HORSEHEAD ROAD"
			- 2 EACH R10-3(1) SIGN (9 IN. x 15 IN.) TO READ "PUSHBUTTON TO CROSS PARK ENTRANCE"
	. •		- 2 EACH W3-3 SIGN (36 IN. × 36 IN.) WITH "NEW" PANEL (24 IN. × 24 IN.) AND FLAG - GROUND MOUNT

## EQUIPMENT LIST "C"

C. EQUIPMENT TO BE REMOVED AND RETURNED TO SHA NO EQUIPMENT TO BE REMOVED AND RETURNED TO SHA.

## PHASE CHART

1	2	3	4	5	6	. 7	8	9	10	11	12	13	14	15	16	17	18
(*) (*) (*) (*)	R) (Y) Y (G) G	(E) (G)		R) (Y) Y (G) G	R Y G	R Y G	R Y G	R Y G	RY	(R) S) G	RYG	於田	於明	<b>於88</b>	於88	<b>於88</b>	於田

PHASE 1 AND 5	R +G−	R +G−	R	R +G−	R +G−	R	R	R	R	R	R	R	DW	DW	ĐW	DW	DW	DW	* <b>*</b>
1 AND 5 CHANGE	PHASE	1 + 5	MAY CH	IANGE TO	) PHASE	1 + 6	, PHASE	2 + 5	OR PHAS	SE 2 +	6								<b>\</b>
PHASE 1 + 6	+G−	G. +G−	G	R	R	R	R	R	R	R	R	R	DW	DW	DW	DW	DW	DW	<b>4</b> —
1 + 6 CHANGE	G +Y−	G ◆Y-	G	R.	R	R	R	R	R	R	R	R	DW	DW	DW	DW	DW	DW	} √
PHASE 2 + 5	R	R	R	G +G−	G +G−	G	R	R	R	R	R	R	DW	DW	DW	DW	DW	ĐW	<b>*</b>
2 + 5 CHANGE	R	R	R	G +Y−	G ◆-Y-	G	R	R	R	R	R	R	DW	DW	DW.	DW	DW	DW	
PHASE 2 + 6	G	G	G	G	G	G	R	R	R	R	R	R	wĸ	WK	wĸ	WK	DW	DW	
PED CLEARANCE	G	G	G	G	G	G	R	R	R	R	R	R	FL/DW	FL/DW	FL/DW	FL/DW	DW	DW	
2 + 6 CHANGE	Y	Υ	Y	Y	Υ	Y	R	R	R	R.	R	R	DW	DW	DW	DW	DW	DW:	•
PHASE 4 + 8	R	R	R	R	R	R	G	G	G	G	G	G	DW	DW	DW	DW	DW	DW	1
4 + 8 CHANGE	R	R	R	R	R	Ŗ	Υ	Y	Υ	Υ	Y	. Y	DW	DW	DW	DW.	DW	DW	
PHASE 4 + 8 ALT	R	R	R	R	R	R	G	G	G	Ğ	G	G	DW	DW	DW	DW	WK	wĸ	
PED CLEARANCE	R	R	R	R	R	R	G	G	G	G	G	G	DW	DW	DW	DW	FL⁄DW	FL/DW	1. I T
4 + 8 ALT CHANGE	R	R	R	R	.R	R	Υ	Y	Y	Υ	Y	Y	DW	DW	DW	DW	DW	DW	<b>Ţ' ♥  </b>
FLASHING OPERATION	FL/Y	FL/Y	FLY	FLY	FL/Y	FLY	FL/R	FL/R	FL⁄R	FL/R	FL⁄R	FL/R	DARK	DARK	DARK	DARK	DARK	DARK	+

EQUIPMENT LIST "B"

DESCRIPTION

B. EQUIPMENT TO BE FURNISHED AND/OR INSTALLED BY THE CONTRACTOR

QUANTITY

CATEGORY CODE

CATEGURY CODE	QUANTITY	DESCRIPTION
203030	6 CY	TEST PIT EXCAVATION
585621	815 LF	12 INCH HEAT APPLIED WHITE PREFORMED THERMOPLASTIC PAVEMENT MARKINGS LINE
585625	115 LF	24 INCH HEAT APPLIED WHITE PREFORMED THERMOPLASTIC PAVEMENT MARKING LINE
801004	16 CY	CONCRETE FOR SIGNAL FOUNDATION
801106	75 LF	WOOD SIGN SUPPORTS 4" × 6"
813014	26 SF	INSTALL GROUND MOUNTED SIGN
802501	600 LF	NO. 6 A.W.G. STRANDED BARE COPPER GROUND WIRE
813015	122 SF	INSTALL OVERHEAD SIGN
805105	120 LF	2 INCH SCHEDULE 80 RIGID PVC CONDUIT - TRENCHED
805115	70 LF	3 INCH SCHEDULE 80 RIGID PVC CONDUIT - BORED
805115	800 LF	3 INCH SCHEDULE 80 RIGID PVC CONDUIT - TRENCHED
805118	180 LF	4 INCH SCHEDULE 80 RIGID PVC CONDUIT - BORED
805140	190 LF	4 INCH SCHEDULE 80 RIGID PVC CONDUIT - TRENCHED
807202	1 EACH	METERED SERVICE PEDESTAL
808050	2 EACH	STEEL POLE WITH TWIN 50 FOOT AND 60 FOOT MAST ARMS
810601	4 EACH	NONINVASIVE DETECTOR, 1000 FT, LEAD-IN
811001	10 EACH	FURNISH AND INSTALL ELECTRICAL HANDHOLE
816001	4 EACH	VIDEO DETECTION CAMERA
816201	1 EACH	DISCRIMINATOR MODULE. 4 CHANNEL. NO. 764
816215	2 EACH	OPTICOM NO. 721 DETECTOR EYE
818004	4 EACH	10 FOOT BREAKAWAY PEDESTAL POLE
813010	2 EACH	250 WATT HIGH PRESSURE SODIUM LAMP AND LUMINAIRE
837001	9 EACH	GROUND ROD - 3/4 INCH DIAMETER × 10 FOOT LENGTH
860270	6 EACH	8 INCH VEHICULAR TRAFFIC SIGNAL HEAD SECTION
860272	38 EACH	12 INCH VEHICULAR TRAFFIC SIGNAL HEAD SECTION
861107	1040 LF	ELECTRICAL CABLE - 5 CONDUCTOR (NO. 14 A.W.G.)
861108	2090 LF	ELECTRICAL CABLE - 7 CONDUCTOR (NO. 14 A.W.G.)
861116	380 LF	ELECTRICAL CABLE - 2 CONDUCTOR (NO. 12 A.W.G.)
866103	2 EACH	15 FOOT LIGHTING ARM ON SIGNAL STRUCTURE
871202	1 EACH	INSTALL CONTROLLER AND CABINET - BASE MOUNT
800000	6 EACH	16" LED COUNTDOWN PEDESTRIAN SIGNAL HEAD
800000	6 EACH	AUDIBLE/TACTILE PEDESTRIAN PUSHBUTTON BASE STATION
800000	1 EACH	AUDIBLE/TACTILE PEDESTRIAN PUSHBUTTON BASE UNIT
800000	2 EACH	CONTROL CABLE, 200 FOOT VIDEO DETECTION CAMERA TO CONTROLLER
800000	2 EACH	CONTROL CABLE, 400 FOOT VIDEO DETECTION CAMERA TO CONTROLLER
800000	95 LF	ELECTRICAL CABLE 1-CONDUCTOR NO. 4 A.W.G THHN/THWN
800000	415 LF	FURNISH AND INSTALL 4 CONDUCTOR OPTICOM CABLE
800000	1 EACH	REMOVE AND DISPOSE OF EXISTING MATERIAL AND EQUIPMENT
800000	1000 LF	ELECTRICAL CABLE - 2 CONDUCTOR (NO. 14 A.W.G.)

тs NO. 4657

STATE OF MARYLAND DEPARTMENT OF TRANSPORTATION STATE HIGHWAY ADMINISTRATION OFFICE OF TRAFFIC & SAFETY



SHEET NO. 4 OF 8

MD 237 AND CHANCELLORS RUN PARK ENTRANCE/HORSEHEAD ROAD



and Associates, LLP 801 South Caroline Street Baltimore, Maryland 21231

(410) 235-3450

**GENERAL INFORMATION SHEET** 

NONE ADVERTISED DATE AUGUST 15, 2008 CONTRACT NO. SM7575171 DESIGNED BY\_ B. DONOWAY ST MARYS COUNTY DRAWN BY B. DONOWAY LOGMILE 18023701.33 N. LEARY 994 8/20/08 TIMS NO. H783 F.A.P. NO. SEE TITLE SHEET TOD NO.

DRAWING TSP - 3 OF 3

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Whitman, Requardt and Associates, LLP Engineers, Architects and Planners 801 South Caroline Street Baltimore, Maryland 21231 410-235-3450